especially as regards the so-called "productivity" feature, and if, as I confidently believe, my rendering of this difficult element is sound, though not simple, I am naturally anxious that it may be properly understood to the end that it may be generally accepted.

IRVING FISHER.

Comment

Professor Fisher's reply to my review of his interest theory illustrates how difficult it is for an economist accustomed to one method of treating an intricate problem fully to enter into an entirely different method. In my thinking about the explanation of interest, the productivity aspect has seemed the most obvious as well as the most important. To Professor Fisher's mind it appears so difficult and illusive that, after having, as he now tells us, written one book chiefly to show its true place in an explanation, he found himself compelled "almost (not quite)" to omit it altogether from his treatment of the phenomenon in a second book attempting a more elementary presentation! The passages which he quotes from his *Rate of Interest* undoubtedly convict me of exaggeration in charging him with ignoring altogether the productivity aspect in his larger book. I cannot but feel, however, that these very passages and the chapters from which they are taken justify my more important contention that his treatment is "incomplete and inadequate." A methodology which causes an author to drop out an essential link when he tries to restate his theory in elementary form seems to me to be almost self-condemned. A careful re-reading of the chapters to which he refers strengthens my impression that his plan of treatment confuses rather than illuminates this phase of the subject.

But, as any reader of my article will observe, my view that Fisher fails to ascribe its proper place to productivity among the causes of interest was less an independent criticism than a conclusion from the detailed strictures on specific links in his reasoning which preceded it. I must confess that his answers to these strictures do not seem to me very convincing. Thus, his argument in support of the view that a general increase in the productivity of capital will lower, not raise, the rate of interest, seems to me to afford a demonstration, not of the truth of his contention but of the validity of my criticism that he fails to apprehend clearly the way in which productivity and time discount operate in the determina-

tion of the current rate of any given period. Again, he appears to think that my refutation of his "first approximation" is disposed of when he shows that the case I assumed was an unusual and exaggerated one. I, of course, deliberately chose the most exaggerated case I could think of because logically it was incumbent upon me to point out but one exception to his sweeping generalization to disprove it. Nor do I at all assent to Professor Fisher's view that ninety-nine out of every one hundred of the persons who frequent pawn-shops would refuse to pledge *all* their future income for ready cash even if they could get loans for one per cent. That they would not "if they fully realized that as a consequence of the loan they would be confronted with starvation within a week" goes without saying. The whole point is that improvident people do not "fully realize" the future consequences of their acts! The strenuous efforts which organized society is constantly compelled to put forth to prevent unskilled wage-earners from falling into peonage and clerks on small salaries from becoming victims of loan sharks are proof that Fisher's estimate of the extent to which forethought is developed among our fellow citizens is far too optimistic. Further, if the plausibility of his refutation of productivity theories does not arise from the fact that he habitually puts forward land as typical, this certainly seems to be the case; and if he agrees with me that a negative rate of interest is theoretically possible, he certainly seems to say just the opposite in the passage cited from *The Rate of Interest.* Finally, I cannot agree that there is any sovereign virtue in mathematical modes of thought that makes the mathematical economist less liable to overlook important aspects of the problem he is discussing than equally logical thinkers whose training has not been along mathematical lines. It was Jevons, if I mistake not, who, in the first enthusiasm over a new idea, solemnly affirmed that "value depends entirely on utility." As this classic blunder illustrates, mathematical economists are quite as prone as other thinkers to see one factor in a problem so clearly that they entirely overlook other equally important factors.

I will not take advantage of my privilege of "having the last word" to inflict further "controversial matter" on the patient readers of the REVIEW, but is it too much to ask that those who read Professor Fisher's reply to my paper will then re-read that paper itself? Only in this way can a conclusion be reached as to the points at issue that will be fair to both sides.

HENRY R. SEAGER.